



Docket No.

199858US2SRD/hc

THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Kouichi ICHIMURA, et al.

SERIAL NO: 09/714,193

GAU: 2184

FILED: November 17, 2000

EXAMINER:

FOR: METHOD FOR QUANTUM INFORMATION PROCESSING AND QUANTUM INFORMATION PROCESSOR

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

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SIR:

Applicant(s) wish to disclose the following information.

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REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37.CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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STATEMENT OF RELEVANCY

Reference AD (JP 10-254569) on Form 1449:

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This reference discloses qubits defined in frequency domain. The qubits consist of fullerenes and carbon nanotubes which include metal atoms or molecules and organic molecules. The manufacturing of the qubits is likely very difficult and it is difficult to maintain a superposition state of a qubit because of short decoherence time of electronic excited states.

Reference AH on Form 1449:

This reference refers to qubits defined in frequency domain. However, the qubits consist of nuclear spins in a molecule, and it is almost impossible to scale up the number of the qubits for practical solution of a problem.

Reference AI on Form 1449:

This reference refers to qubits of solid state materials in an optical cavity, but it describes nothing about qubits defined in frequency domain.

References AJ through AQ on Form 1449 are discussed in the specification

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